

1 **Amendment to the Claims**

2 **In the Claims:**

3 Please amend Claim 1 as follows:

4 1. (Currently Amended) A system for obtaining at least one output signal corresponding to at  
5 least one image of an object ~~that is formed along an inclined focal plane passing through the object,~~  
6 wherein there is relative motion between the object and the system, comprising:

7 (a) a collection lens disposed so that light traveling from the object passes through  
8 the collection lens and travels along a collection path, said collection lens substantially collimating  
9 light from the object;

10 (b) an imaging lens disposed in the collection path to receive light that has passed  
11 through the collection lens, producing focused light that is directed along an imaging path; and

12 (c) a time delay integration (TDI) detector configured to generated at least one  
13 output signal corresponding to at least one image of an object, said TDI detector disposed to receive  
14 light from the object along an imaging path, forming said at least one image of the object on a plane  
15 of the focused light directed along the imaging path, said TDI detector that is being inclined at an  
16 angle relative to the imaging path, so that the a plane of the TDI detector is not perpendicular to the  
17 imaging path, said angle determining an angle of the inclined focal plane; and so that light from the  
18 imaging path that is incident on a first part of said TDI detector forms an image exhibiting a first  
19 focus, while light from the imaging path that is incident on a different part of said TDI detector forms  
20 an image exhibiting a different focus;

21 ~~(b) — an optical element disposed between the object and the TDI detector and~~  
22 ~~oriented so that light traveling from the object is directed along the imaging path to form said at least~~  
23 ~~one image of the object on the plane of the TDI detector, in response thereto, said TDI detector~~  
24 ~~producing one of:~~

25 (i) ~~— an output signal corresponding to an image of the object relative to the~~  
26 ~~inclined focal plane, said output signal being a composite of the light from the object at differing~~  
27 ~~focal positions within the object, taken along the inclined focal plane, and being indicative of at least~~  
28 ~~one characteristic of the object at the differing focal positions; and~~

29 (ii) ~~— a plurality of output signals, each output signal corresponding to an~~  
30 ~~image of the object formed on the plane of the TDI detector relative to a different focal position along~~

1 ~~the inclined focal plane, said plurality of output signals being indicative of at least one characteristic~~  
2 ~~of the object at different focal positions within the object, along the inclined focal plane.~~

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18 Please add new Claim 47 as follows:

19 --47. (New) An imaging system configured to produce at least one image of an object while  
20 there is relative movement between the object and the imaging system, comprising:

21 (a) a collection lens disposed so that light traveling from the object passes through  
22 the collection lens and travels along a collection path, said collection lens substantially collimating  
23 light from the object;

24 (b) a focusing lens disposed in the collection path to receive light that has passed  
25 through the collection lens, producing focused light that is directed along an image path; and

26 (c) a light sensitive detector disposed to receive the focused light directed along  
27 the image path, said detector being disposed at an angle relative to focusing lens, such that light from  
28 the image path that is incident on a first part of said detector exhibits a first focus, while light from  
29 the image path that is incident on a different part of said detector exhibits a different focus.--  
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